

**WHAT IS CLAIMED IS:**

1. A rotary atomization coating apparatus comprising:  
an atomizer head having an atomizer head inner part; and  
a center cone portion that is provided at a back side of the atomizer head inner part and that has a tip angle  $\theta$  that is in a range of  $30^\circ < \theta < 90^\circ$ .
2. The rotary atomization coating apparatus according to claim 1, wherein the tip angle  $\theta$  of the center cone portion is in a range of  $60^\circ < \theta < 80^\circ$ .
3. The rotary atomization coating apparatus according to claim 1, further comprising a coating spray nozzle,  
wherein the center cone portion has an inclined surface portion that includes a straight line-formed portion, and the straight line-formed portion extends from the tip portion of the center cone portion to a point where a virtual line extending from an outermost side portion of the coating spray nozzle passes through the inclined surface portion.
4. The rotary atomization coating apparatus according to claim 1, further comprising a coating spray nozzle,  
wherein the center cone portion has an inclined surface portion that includes a concave portion, and the concave portion is located outward of a point where a virtual line extending from an outermost side portion of the coating spray nozzle passes through the inclined surface portion.
5. The rotary atomization coating apparatus according to claim 1, further comprising a plurality of coating spray nozzles.
6. The rotary atomization coating apparatus according to claim 1, further comprising a coating spray nozzle that sprays a coating material to a location that is eccentric from a rotating axis of the atomizer head.
7. A rotary atomization coating apparatus comprising:  
an atomizer head having an atomizer head inner part; and  
a center cone portion provided at a back side of the atomizer head inner part, which has an inclined surface portion,

wherein an angle between the inclined surface portion of the center cone portion and the atomizer head rotating axis is in a range of 15° to 45°.

8. The rotary atomization coating apparatus according to claim 7, wherein the angle between the inclined surface portion of the center cone portion and the atomizer head rotating axis is in a range of 30° to 40°.

9. The rotary atomization coating apparatus according to claim 7, further comprising a coating spray nozzle,

wherein the center cone portion has the inclined surface portion that includes a straight line-formed portion, and the straight line-formed portion extends from the tip portion of the center cone portion to a point where a virtual line extending from an outermost side portion of the coating spray nozzle passes through the inclined surface portion.

10. The rotary atomization coating apparatus according to claim 7, further comprising a coating spray nozzle,

wherein the center cone portion has the inclined surface portion that includes a concave portion, and the concave portion is located outward of a point where a virtual line extending from an outermost side portion of the coating spray nozzle passes through the inclined surface portion.

11. The rotary atomization coating apparatus according to claim 7, further comprising a plurality of coating spray nozzles.

12. The rotary atomization coating apparatus according to claim 7, further comprising a coating spray nozzle that sprays a coating material to a location that is eccentric from a rotating axis of the atomizer head.

13. A rotary atomization coating apparatus comprising:  
an atomizer head having an atomizer head inner part; and  
a center cone portion provided at a back side of the atomizer head inner part, which has an inclined surface portion,

wherein an angle between the inclined surface portion of the center cone portion and a coating spraying direction of a coating spray nozzle is in a range of 15° to 45°.

14. The rotary atomization coating apparatus according to claim 13, wherein the angle between the inclined surface portion of the center cone portion and the coating spraying direction of the coating spray nozzle is in a range of 30° to 40°.

15. The rotary atomization coating apparatus according to claim 13, further comprising a coating spray nozzle,

wherein the center cone portion has the inclined surface portion that includes a straight line-formed portion, and the straight line-formed portion extends from the tip portion of the center cone portion to a point where a virtual line extending from an outermost side portion of the coating spray nozzle passes through the inclined surface portion.

16. The rotary atomization coating apparatus according to claim 13, further comprising a coating spray nozzle,

wherein the center cone portion has the inclined surface portion that includes a concave portion, and the concave portion is located outward of a point where a virtual line extending from an outermost side portion of the coating spray nozzle passes through the inclined surface portion.

17. The rotary atomization coating apparatus according to claim 13, further comprising a plurality of coating spray nozzles.

18. The rotary atomization coating apparatus according to claim 13, further comprising a coating spray nozzle that sprays a coating material to a location that is eccentric from a rotating axis of the atomizer head.